

REMARKS

Applicants respectfully request that this amendment be entered, and that their subject U.S. Patent application be passed to issuance in view thereof. Applicants respectfully submit that the amendment to claim 26 more clearly define Applicants' invention and does not require further search by the Examiner. No new matter has been added to the application by virtue of the present amendment.

Claims 1-38 are pending in the subject application. Applicants respectfully request that claim 26 be amended and claims 1-25 be canceled.

Claim Rejections – 35 U.S.C. 102 (b)

The Examiner has rejected claims 26, 28, 35 and 37-38 under 35 U.S.C. 102(b) as being anticipated by Beasom (U.S. Patent No. 5,841,169).

Applicant has amended claim 26 to more clearly distinguish Applicant's method over Beasom. For example, referring to FIG. 1 of the application, doped regions 12, 14 and 20 are formed on a first region of substrate 10 and, in another region of substrate 10, substrate 10 is etched to form isolation regions 16, 16A adjacent the first region. The first region is not removed and remains in place during the formation of the doped regions 12, 14 and 20 (see paragraph 0035). Thus, the doped regions 12, 14 and 20 are formed in an actual part of the substrate and not a substitute material refilled into the first region of the substrate.

Beasom does not anticipate or suggest Applicant's claim 26, as amended, and claims dependent thereupon. Referring to column 4, lines 14-53 of Beasom, Beasom teaches a method of etching a single crystal substrate to remove an entire portion of the substrate to form a trench with a tapered shape. An oxide layer 209 (see FIG. 2) is then formed on sidewalls of the trench. The trench is then filled with polysilicon to form a device region within the trench. Doped regions (ie. 202, 203) are then formed in the polysilicon device region. Thus, Beasom removes an entire portion of the single crystal substrate where the doped regions are subsequently formed

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and fills the region with polysilicon, and then forms the doped regions in the polysilicon region. Beasom's method requires a portion of the single crystal substrate to be removed and replaced with a substitute material (i.e. polysilicon). Beasom is silent on forming doped regions on a region of the substrate without removing the region of the substrate. The method of Beasom adds process complexity and cost due to the additional removal and substitution steps.

Therefore, Applicant believes the rejections to the claims under 35 U.S.C. 102(b) have been overcome.

Claim Rejections – 35 U.S.C. 103 (a)

The Examiner has rejected claims 29 and 31-33 under 35 U.S.C. 103(a) as being unpatentable over Beasom (U.S. Patent No. 5,841,169); claims 27 and 30 under 35 U.S.C. 103(a) as being unpatentable over Beasom in view of Mack et al. (U.S. Patent No. 4,736,271); and claims 34 and 36 under 35 U.S.C. 103(a) as being unpatentable over Beasom in view of Robinson et al. (U.S. Patent No. 5,268,316).

As discussed above, Applicant respectfully submits that Beasom individually or in combination with Mack et al. or Robinson et al. do not teach or suggest Applicant's claim 26, as amended, or claims dependent thereupon.

Therefore, Applicant believes the rejections to the claims under 35 U.S.C. 103(a) have been overcome.

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CONCLUSION

In light of the foregoing amendments and remarks, all of the claims now presented are believed to be in condition for allowance, and Applicant respectfully requests that the outstanding rejections be withdrawn and this application be passed to issue at an early date.

The Examiner is urged to call the undersigned at the number listed below if, in the Examiner's opinion, such a phone conference would aid in furthering the prosecution of this application. No fee is due by virtue of this amendment. However, if the PTO determines that a fee is required, please charge Applicant's Deposit Account, 09-0456. If any extensions or fees are not accounted for, such extension is requested and the associated fee should be charged to our deposit account.

Respectfully Submitted,

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